DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
INFORMATION SYSTEMS OFFICE (ISO)
PLANNED PROCUREMENTS
January 2000

PROGRAM DESCRIPTION	FUNDING	SCHEDULE	PROGRAM MGR
Information Assurance Science and Engineering Tools (IASET): The IASET program will provide a science-based environment for system design and assessment that will yield improved Information Assurance for near-term and next-generation systems and eventually allow for faster design and assessment at less cost. IASET will produce postulates, theorems, relationships, metrics, models, tools, and methodologies for IA design and assessment. It will also provide an environment for design and assessment of IA that will allow for seamless operation of IA design time software tools, hardware, and methodology – something that is now lacking and which presents a grave threat for assurance of U.S. information systems.	$8M	BAA 4QFY01 Total program: 3 years	Mr. Michael Skroch ISO
Cyber Command and Control (CC2): The CC2 program will develop tools, components, and a systems framework for monitoring and managing cyber defenses to improve survivability of military, civil, and commercial systems running on the Next Generation Information Infrastructure. The goal is to provide human-directed capabilities for defending against serious and determined information warfare campaigns and preserving mission-critical functions. Increasingly sophisticated defensive mechanisms are being developed in other programs. Staving off resourceful and adaptive adversaries who attempt to exploit our nation's asymmetric vulnerability to information attack, however, will also require human direction and judgement. The CC2 program will provide human commanders with analytical decision support capabilities and the ability to orchestrate defensive actions and mechanisms for effective information warfare defense despite imperfect systems and limited resources.	$30M	BAA 3QFY01 Total program: 4 years	Ms. Catherine McCollum ISO

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Strategic Intrusion Assessment (SIA): The SIA program will identify and assess large-scale coordinated attacks, enabling response at the appropriate level. Technologies will be developed to: (1) facilitate coordination of local detectors, allowing them to filter reports based on global information, suppressing false alarms; (2) correlate reports across detectors to distinguish events of elevated significance from those of only local interest; (3) infer attack plans; and (4) assess attack scope and damage to enable appropriate response and recovery. SIA will leverage improved local intrusion detectors developed under the Information Survivability program, and the Common Intrusion Detection Framework (CIDF) initiated under that program.	$30M	BAA 3QFY00 Total program: 4 years	Mr. O. Sami Saydjari ISO
Human Identification at a Distance: The HumanID program objective is to develop automated multi-modal surveillance technology for identifying humans at a distance, thus allowing for early warning of possible terrorist attacks. Technologies will be developed for measuring (and collecting) biometric features that will identify an individual from a distance (> 15 feet) operating 24 hours per day in all-weather conditions. The resulting probability of detection should be 0.99; the probability of false alarm should be 0.01 given a database of up to a million known individuals. HumanID will focus on four essential elements or components of technical research: technology development to solve HumanID tasks, database collection, independent evaluations, and scientific experiments to assess validity of these technologies. The program will provide tools for crucial aspects of countering asymmetric threats including automatic cataloging of repeat visitors, automated detection of known suspects, accelerated interdiction, and collection of forensic evidence when attacks do occur. If successful, HumanID will make security personnel more effective in identifying people who may have harmful intent, and will allow early warning to expedite interdiction.	$50M	BAA 3QFY00 Total program: 4 years	Mr. David Gunning ISO

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Dynamic Assembly for Systems Adaptability, Dependability and Assurance (DASADA): As software systems become more complex, they must be able to reconfigure and evolve themselves dynamically, while the system is in operation. This project will evaluate promising technologies for the development of dynamic gauges or measures of composability that will enable software components from any source to support assured applications. Program development activities will focus on three broad areas of the software development/implementation life cycle: design, coordination, and validation. Outputs from this program will be used to plan and implement a new program that will ensure that the critical properties of complex, heterogeneous software systems are maintained during and after composition, adaptation and deployment.	TBD	BAA 00-22 Proposals due: 2/1/00 Total program: 4 years	Dr. John Salasin ISO
DARPA Agent Markup Language (DAML): The program goal, to create the technologies so that software agents can dynamically identify, communicate and understand each other, will be divided into four tasks: DAML ontology and markup tool development; DAML-agent component development; DAML language/tool evaluation; and Integration and transition. This program is being solicited jointly with Taskable Agent Sofware Kit (TASK). *Funding reflects total of both programs over 5 years.	$70M*	BAA 00-07 Proposals due: 2/7/00 Total program: 5 years	Dr. Jim Hendler ISO
Taskable Agent Software Kit (TASK): The TASK program will extend the current scientific and mathematical foundations of agent-based computing with the goal of adding rigor to the engineering of agent-based systems and tools. In particular, TASK will develop mathematically correct techniques for modeling and analyzing agent behaviors, agent design methods, and the design of agent creation tools. Using these models, TASK will compare the performance of competing agent-creation approaches to test agent behaviors with respect to mathematically validated domain models. Key research areas are agent systems modeling, experiment design/collection/analysis, and well-founded agent creation tools. This program is being solicted jointly with DARPA Agent Markup Language (DAML). *Funding reflects total of both programs over 5 years.	$70M*	BAA 00-07 Proposals due: 2/7/00 Total program: 5 years	Dr. Jim Hendler ISO

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Autonomic Information Assurance (AIA): The AIA program will develop technologies contributing to the security and survivability of the Next Generation Information Infrastructure for both military and e-commerce use. Effectively countering automated attacks requires intelligent but reflexive defenses capable of operating in degraded conditions to maintain and quickly restore system and network health for continued operation of critical business processes and mission activities. For this reason, AIA will develop flexible and adaptive sensors, defenses and defensive control systems to counter automated attacks, minimize damage and optimize system assurance postures for continuing critical operations even while under sustained assault by moderately sophisticated adversaries.	$60M	BAA 3QFY00 Total program: 4 years	Mr. Brian Witten ISO
Joint Theater Logistics Advanced Concept Technology Demonstration (JTL ACTD): The JTL ACTD is a 3-year, DARPA-funded program that leverages current and emerging low to medium risk technologies developed by other ACTDs and development programs to produce and rapidly transition advanced logistic and operational planning and execution capabilities to the warfighter. The JTL ACTD will produce an enhanced, near-real time collaborative capability for integrated operations and logistic visualization, logistic plan generation, and continuous execution tracking during joint operations. The JTL ACTD has three operational objectives. The first is to fuse operations and logistic information that will, for the first time, permit operators and logisticians to share common data and views of operational plans and mission guidance. The second develops a dynamic capability that produces and assesses logistic plans to support mission guidance and supports the delivery of tailored logistic packages and sustainment directly to each level of the military operation. The final objective provides an interactive environment to track the logistic situation, assess the impact of current logistics support upon operations, and shift forces, equipment, and supplies enroute to meet changing requirements.	$23M	BAA 00-12 Proposals due: 2/4/00 Open through: 12/22/00 Total program: 5 years	Dr. Lou Mason ISO